

Name: _____

Natural Selection Activity – Goldfish

15 pts

Background:

You are a goldfish predator. There are two different species of goldfish: yellow goldfish and dark colored goldfish. The yellow goldfish stand out among the coral reef while the darker goldfish can hide in the shadows. The yellow goldfish generally taste better than the dark goldfish, and because they are easier to find, they are your first choice as a food source. Dark goldfish taste salty and hide in the shadows so they are harder to find. Because of this, you eat only the yellow goldfish. New goldfish are born every 'year' (during spawning) so you will obtain another handful of goldfish if two or more are left in your population from the previous generation.

Procedure:

- 1) Obtain a population of goldfish, and in Table 1, record the number of yellow goldfish, the number of dark goldfish, and the total number of goldfish for Generation 1.
- 2) Eat THREE Yellow Goldfish. Do NOT eat any Dark Goldfish.
- 3) Get a new generation from the teacher (provided you have at least 2 of the same species to reproduce) and record the number of yellow goldfish, the number of dark goldfish, and the total number of goldfish for Generation 2.
- 4) Repeat steps 1-3 for a total of 4 generations.
- 5) Determine the percentage of yellow goldfish and dark goldfish for each generation.
 - Divide the number of that species of goldfish by the total number of goldfish in that generation
 - Round to the nearest whole number
 - Record the percentages in Table 2
- 6) Create a line graph showing the percentage of each species of goldfish over time using the data from Table 2.
 - Use a solid line to represent yellow goldfish
 - Use a dashed line to represent dark goldfish
- 7) Answer the Conclusion questions using the data shown in your graph

Hypothesis:

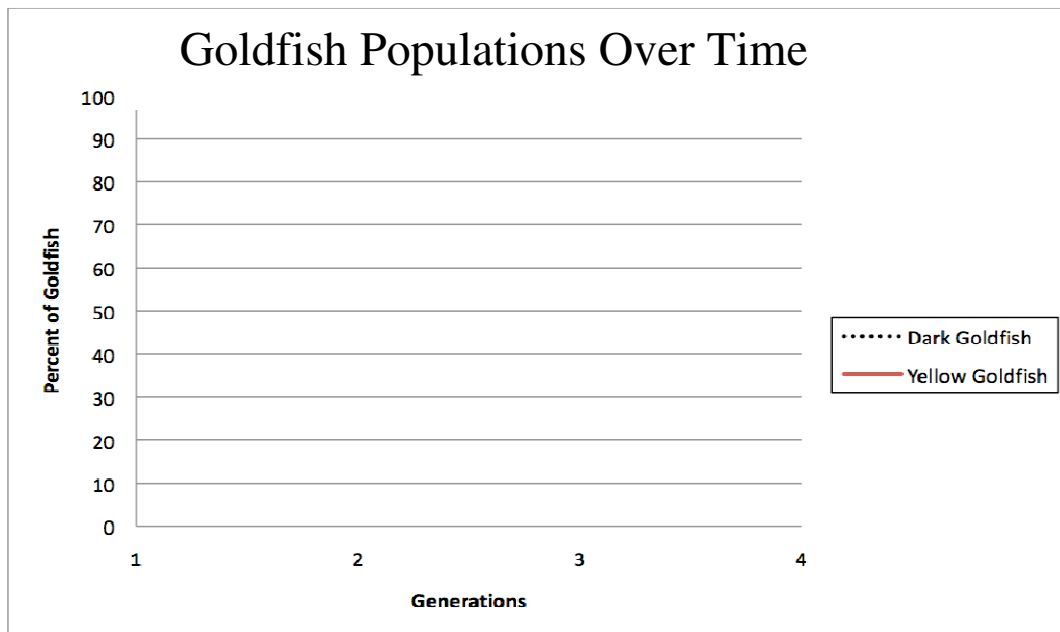
Over time, what do you expect will happen to:

- The number of yellow goldfish?
- The number of dark goldfish?

Data:

Table 1: Number of Goldfish for Each Generation			
Generation	Number of Yellow Goldfish	Number of Dark Goldfish	Total Number of Goldfish
1			
2			
3			
4			

Table 2: Percentage of Each Species of Goldfish		
Generation	Percentage of Yellow Goldfish (# yellow goldfish / # total goldfish)	Percentage of Dark Goldfish (# dark goldfish / # total goldfish)
1		
2		
3		
4		

**Conclusion:**

1) What happened to the percentage of each type of goldfish over time?

- Yellow Goldfish?
- Dark Goldfish?

2) Why do you think this happened? BE SPECIFIC! Think about natural selection...